- **WE HAVE HEARD FROM DR. SANDERS AND MR KRATZ—THEIR MESSAGE IS CLEAR—WE NEED TO FOCUS ON HOW WE SUPPORT, MAINTAIN AND UPGRADE OUR SYSTEMS**

- **THE UNDER SECRETARY OF DEFENSE FOR ACQUISITION REFORM HAS PROVIDED US WITH THE OPPORTUNITY—AND THE ENVIRONMENT TO MODERNIZE AND IMPROVE OUR BUSINESS AND TECHNICAL PRACTICES.**

- **A MAJOR DRIVER BEHIND ACQUISITION REFORM HAS BEEN THE BUDGET. IF WE ARE GOING TO MODERNIZE AND LIVE WITHIN THE BUDGET CONSTRAINTS WE NEED TO FIND PLACES WHERE WE CAN SAVE MONEY. MUCH OF OUR FOCUS HAS BEEN ON REFORMING THE ACQUISITION PHASES OF THE SYSTEM LIFE CYCLE—BUT IN TRUTH THE OPERATIONS AND SUPPORT OR O&S PHASE OF THE SYSTEMS LIFE CYCLE IS WHERE WE SPEND THE LION'S SHARE OF OUR SYSTEMS RELATED DEFENSE DOLLARS. THEREFORE, IT WOULD ONLY MAKE SENSE THAT THIS IS ANOTHER "TARGET OF OPPORTUNITY" THAT IS CRITICAL**

TO REFORM, MODERNIZE AND IMPROVE OUR BUSINESS AND TECHNCIAL PRACTICES.

- **SPECIFICALLY, LOOK AT THE HISTORY OF JUST A FEW OF OUR LEGACY SYSTEMS.**

CHART

- **THIS CHART HAS BEEN USED BY THE LOGISTICS COMMUNITY FOR SOME TIME TO MAKE THE POINT THAT O&S COSTS ARE HIGH PRINCIPALLY BECAUSE OF LOW SYSTEM RELIABILITY THAT HAS IN TURN RESULTED IN MORE SPARES BEING REQUIRED—AND THEREFORE COSTING US MORE MONEY**

- **WHILE THERE IS SOME TRUTH IN THIS, IT DOES NOT TELL THE WHOLE STORY—O&S COSTS AS WE ALL KNOW ARE MADE UP OF MANY ELEMENTS INCLUDING FUEL, MANPOWER, AMMUNITION, EXISTING SUPPORT INFRASTUCTURE ETC—NOT ALL OF THESE ARE DIRECTLY**

TIED TO RELIABILITY EVEN THOUGH IT MAY PLAY A PART IN SOME. OPERATIONAL TEMPO IS ALSO ANOTHER MAJOR CONTRIBUTING FACTOR. IT STANDS TO GOOD REASON THAT THE MORE WE USE A SYSTEM, THE HIGHER THE O&S COSTS ARE GOING TO BE, ESPECIALLY IF THE SYSTEM USES FUEL.

- **BUT THAT IS NOT MY FOCUS. WHEN I LOOK AT THIS CHART, I SEE A BIG OPPORTUNITY.**

- **AS WE CAN SEE—THERE IS AMPLE OPPORTUNITY TO MAINTAIN AND MODIFY THESE SYSTEMS—ESPECIALLY WHEN YOU CONSIDER THE LONGER O&S TIMEFRAME COMPARED TO THE DEVELOPMENT TIMEFRAME.**

- **MOREOVER—WE ARE ACTIVELY TRYING TO SHORTEN THE ACQUISITION LIFE CYCLE..**

- **THE OPPORTUNITY OR CHALLENGE TO THE ENGINEERING COMMUNITY IS THIS—HOW DO WE**

COLLECTIVELY DESIGN A SYSTEM TO BE EFFICIENTLY AND EFFECTIVELY MAINTAINED DURING OPERATION—BUT ALSO—HOW DO WE DESIGN A SYSTEM TO BE EFFICENTLY AND EFFECTIVELY UPGRADED WITH NEW TECHNOLOGY OR CAPABILITY—OR AGAINST A NEW THREAT OVER TIME ?

- **OUR EFFORTS UNDER ACQUISITION REFORM HAVE IMPROVED OUR PRACTICES TO DESIGN AND PRODUCE NEW SYSTEMS EFFICIENTLY AND EFFECTIVELY.**

- **WE HAVE INSTITUTONALIZED IPPD—WE HAVE FORMED IPTS TO BRING THE ACQUISITION LOGISTICIAN INTO THE DESIGN PROCESS—WE HAVE EXPLOITED OPEN SYSTEMS ARCHITECTURES AND REDUCED THE NUMBER OF MANDATORY MILITARY SPECIFICATIONS AND STANDARDS—WE HAVE UPDATED THE ACQUISITION WORKFORCE CURRICULUM AT THE DEFENSE ACQUISITION UNIVERSITY TO REFLECT THESE AND MANY OTHER CHANGES.**

- **I BELIEVE WE HAVE DONE A REASONABLE JOB TO ENSURE THAT ACQUISITION REFORM HAS BEEN PUSHED OUT INTO THE FIELD.**

- **THERE HAVE BEEN ROAD SHOWS, ACQUISITION REFORM STANDDOWN DAYS, WORKSHOPS, SATELLITE BROADCASTS, AND A HECK OF A LOT OF MEDIA EXPOSURE.**

- **BUT WITH ALL THIS ACTIVITY, HAS THE ENGINEERING COMMUNITY—THOSE OF US HERE TODAY—COLLABORATED ON HOW WE CAN COMPLEMENT EACH OTHERS' ACTIVITIES.**

- **SPECIFICALLY, HAVE THOSE OF US ON THE ACQUISITION SIDE OF THE HOUSE SHARED OUR LEESONS LEARNED WITH IPPD—THE USE OF IPTS—OUR EFFORTS TO ADOPT COTS AND OUR VIEWS ON THE ANTICIPATED PAYOFF OF AN OPEN SYSTEMS ARCHITECTURE ?**

- **HAS THE SYSTEM OPERATING/SUSTAINING COMMUNITY SHARED THE LIMITATIONS OF APPLYING CAIV ? THE NUANCE ASSOCIATED WITH USING COTS--- OR OPEN ARCHITECTURES ? THE PRESSURE OF MAINTAININGG AN OPERATIONS TEMPO WHILE TRYING TO DO NORMAL MAINTENANCE OR A SYSTEM UPGRADE. TRYING TO REPLACE OR MAINTAIN PARTS, COMPONENTS OR SUB-SYSTEMS WHERE THE OEM HAS GONE OUT OF BUSINESS OR JUST STOPPED MAKING THE PRODUCT.**

- **I BELIEVE WE HAVE A LOT TO SHARE WITH EACH OTHER—THAT IS THE ACQUISITION AND SUSTAINMENT ENGINEERING COMMUNITIES—THAT'S WHY WE ARE HERE TODAY.**

- **NOW DON'T GET ME WRONG—A LOT OF GOOD WORK AND COMMUNICATIONS HAS AND IS GOING ON. TAKE THE EXAMPLE OF THE NSSN**

CHART

- **THE QUESTION WE WANT TO ANSWER TODAY IS—HOW CAN WE DUPLICATE THIS KIND OF GOOD NEWS STORY WITH OTHER SYSTEMS ?**

- **HOPEFULLY, WE WILL FIND OUT THIS WEEK.**

- **BEFORE I BRING ON THE PANEL, LET ME SHARE WITH YOU JUST HOW IMPORTANT WE ARE TO THE TECHNICAL COMMUNITY AT LARGE.**

- **DR. SANDERS AND I ARE OFTEN ASKED TO SPEAK AT VARIOUS WORKSHOPS, SYMPOSIA, ETC. IN THE AREAS OF QUALITY—TEST AND EVALUATION—MANUFACTURING—SOFTWARE—ACQUISITION LOGISTICS—OPEN SYSTEMS—RELIABILITY AND MAINTAINABILITY—MODELING AND**

SIMULATION AND OF COURSE SYSTEM ENGINEERING IN GENERAL—JUST TO NAME A FEW.

- **THE CONSISTENT THEME WITH ALL THESE FUNCTIONAL DISCIPLINES IS THIS—WE HAVE TO WORK WITH THE DESIGN ENGINEER , THE OPERATORS AND SUSTAINERS TO BE SURE WE ALL UNDERSTAND EACH OTHERS' NEEDS AND REQUIREMENTS.**

- **IT IS CLEAR—AS I LISTEN TO THE INDIVIDUAL FUNCTIONAL COMMUNITIES—THAT THIS COMMUNITY IS EXPECTED TO EFFECTIVELY AND EFFICIENTLY INTEGRATE THE MANY DISCIPLINES IT TAKES TO DESIGN—DEVELOP----PRODUCE—MAINTAIN AND UPGRADE THE DEPARTMENT'S SYSTEMS.**

- **THE CHALLENGE IS FOR US TO JUST DO IT.**